DOCUMENT RESUME

ED 036 760 AC 006 566

AUTHOR Long, Huey B.
TITLE Information Sources, Dogmatism, and Judgmental Modifications.
PUB DATE 70
NOTE 11p.; Paper presented at the Adult Education Research Conference, Minneapolis, Minnesota (February 27-28, 1970)

EDRS PRICE EDRS Price MF-$0.25 HC-$0.65
DESCRIPTORS Analysis of Variance, Auditory Perception, *Conformity, *Dogmatism, *Employment Level, Factor Analysis, *Information Sources, Measurement Instruments, *Perception, Research, Visual Perception
IDENTIFIERS Asch Vertical Line Scale, Rokeach Dogmatism Scale

ABSTRACT

This study examined differences in the number of perceptual judgment modifications made by 36 subjects showing different levels of dogmatism when the source of information was manipulated among superior, subordinate, and peer sources. An experimental and a control group were used, and a 2x3 factorial analysis design was developed. Dogmatism was measured by Rokeach's Dogmatism Scale; and judgment modification, by Asch's Vertical Line Scale. Status was determined by the official position of subjects within their employment group in a governmental agency. Modification scores differed significantly by information sources (status) and dogmatism. General tendencies suggest that high dogmatism subjects receiving information from a subordinate source changed their minds less; that they make more modifications when a peer source is involved; and that more modifications were made by subjects receiving from a peer source, with high dogmatic subjects making slightly more such changes than low dogmatic subjects. (Six references and three tables are included.) (author/ly)

ED036760

OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY Huey B. Long

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

Information Sources, Dogmatism, and Judgmental Modifications

Huey B. Long

This study was designed to determine variations in the modification of judgment when selected personal and social variables were manipulated. Specifically, dogmatism was the personal variable and status within an employment group was the social variable in the design.

Existing theory suggests that high dogmatic individuals may be expected to manifest a higher degree of conformity with information received from authority figures. Thus, it appears that high dogmatic employees in a highly structured employment situation would reflect a high rate of judgmental modification. However, there are also very strong suggestions that individuals may be highly susceptible to suggestions from peers. For example, Newcomb (1) has said, "the theoretical bases for assuming that peer groups effects should be rather considerable are not particularly abstruse."

Newcomb elaborates to suggest that people respond to a situation as they perceive it to be. Furthermore, the perception of the situation appears to be guided in its development by group rewards and punishment or by success and failure. Thus, behavior appears to be stimulated by a recognition of what kind of behavior will be or will not be rewarded by the peer group.

Research Design and Methodology

The research design and methodology reported here was developed to provide a framework based on the above theories that would allow the E to factor out the differing influences under consideration.[1] To accomplish the task, 36 employees of a state governmental agency were selected from a sample

of 59 employees and placed in six categories according to treatment (information source) and personality characteristics (dogmatism).[2]

The information shared with each of the 36 Ss was the length of a line. This information was then utilized by the S to make a decision to agree or disagree with the information provided to him by three other employees. Treatment was varied by manipulating the information source. Figure 1 graphically illustrates the design.

	SUPERIOR INFORMATION SOURCE	SUBORDINATE INFORMATION SOURCE	PEER INFORMATION SOURCE	TOTAL
HIGH DOGMATISM	N=6	N=6	N=6	N=18
LOW	N=6	N=6	N=6	N=18
Total	N=12	N=12	N=12	N=36

Figure 1 - A graphic illustration of the arrangement of Ss in a 3x2 design.

Each S was twice administered a version of Asch's (2) vertical line test where the length of a standard line became the critical judgmental factor. The first test was a paper and pencil test; the second test was oral. In the written test no information was shared among the participants. In the oral test the confederates made spurious selections and thus provided inaccurate information to the S for his use in making a decision.

Definition of Terms

Judgmental Modification was operationally defined as the score that resulted by subtracting the number of errors made by each S on the

written visual test from the number of errors made on the oral visual test. Furthermore, the oral errors were required to be consistent with spurious selections made by the confederates and had to be different from the selection of the S made on the written version of the vertical line test.

Subordinate was operationally defined as referring to another employee of the Florida Forest Service who was of a lower employee rank than the S.

Peer was operationally defined to refer to employees of the Florida Forest Service who were of equal employment rank as the S.

Superior was operationally defined as referring to another employee of the Florida Forest Service who was of higher employee rank than was the S.

Visual test was operationally defined as that version of the Asch Vertical Line Scale which served as the instrument to measure conformity.

Data Collection Procedure

The experimental procedure followed in this study is outlined below:

Assignment of subjects to experimental groups;

Administration of the written visual tests which served as the control;

Selection and briefing of confederates;

Administration of the oral visual tests; and

Comparison of the results of the written and oral tests to obtain conformity scores.

Treatment of the Data

Prior to testing the hypotheses a two-way analysis of variance was conducted to establish the presence of similarities or differences among the experimental groups. Data generated through the analysis were accepted as indicating (1) no significant differences among the experimental groups according to information source category and (2) a significant difference

existed between the low dogmatic and the high dogmatic categories. Table I reports the results of the test of significance.

(Table I is to be inserted here.)

After completing the above test, the hypotheses were submitted to an analysis of variance treatment which was extended to include a factorial analysis. Table 2 contains the results of the analysis of variance. Table 3 extends the analysis to locate ~~the~~ specific differences among the ~~columns or treatments~~ cells.

A two tailed test was applied to the data utilizing a pre-established .05 level of significance.

(Table 2 is to be inserted here.)
(Table 3 is to be inserted here.)

Findings

Table 2 reveals that a significant difference existed among the three treatments and between dogmatism categories. The information generated and reported in Table 2, however, does not locate the differences.

Data reported in Table 3 were interpreted to suggest the following:

1. There were significant differences in the number of judgmental modifications among the three treatment groups.

2. There were significant differences in the number of judgmental modifications between the high and low dogmatic groups. ~~However, such differences are not identifiable without observing the relationships as revealed in contrasts 14, 15, and 16 in Table 3.~~

3. Overall comparisons of Ss receiving information from superiors versus subordinates, superiors versus peers, ~~and subordinates versus peers~~ revealed no significant difference in the number of judgmental modifications.[2]

4. However, when specific cells were analyzed, the findings were interpreted to suggest that high dogmatic Ss modified judgments

to agree with peer sources. There were no significant differences between high dogmatic Ss receiving information from superior and subordinate sources. Contrast 1, 2, and 3 in Table 3 examine these differences.

5. Among low dogmatic Ss there were no significant differences in judgmental modifications based on information source. Contrast 4, 5, and 6 provide information concerning this analysis.

6. Low dogmatic Ss modified their judgment significantly more than did high dogmatic Ss when the information was from a superior source. Contrast 7, 8, and 9 in Table 3 examine the differences.

Overall differences according to dogmatism (row effects) were significant. However, the significant differences were not straightforward but were located among different cells.

General tendencies as revealed suggest (1) high dogmatic Ss receiving information from a subordinate source made fewer judgmental modifications; (2) high dogmatic Ss receiving information from a peer source made more judgmental modifications; (3) overall judgmental modification was higher among Ss receiving information from peer source with high dogmatic Ss making slightly more modification of judgment than low dogmatic Ss when information was from a peer source; and (4) low dogmatic Ss generally reflecting higher frequency of judgmental modifications.

The above general tendencies and the specific findings of the statistical treatments revealed a behavioral pattern among the Ss different from the pattern that might have been expected according to theory surrounding the behavior of high dogmatic individuals. For example, low dogmatic Ss conformed more than the high dogmatic Ss. Unless other explanations can account for the differences, additional conceptualization of the behavior of dogmatic individuals appears desirable. For example, whereas the general

tendency of high dogmatic Ss was to conform more when the information was from a superior source than when the information was from a subordinate source, the difference among these Ss was not significant. Furthermore, the absence of a ~~clear~~ consistent overall categorial difference between the high and low dogmatic Ss suggest that dogmatism may not be a universally strong variable. Such an observation appears to have support in the work of Long (3) and Youniss (4). Thus, it appears that theories of peer influence may provide a more efficient framework within which analyses of the acceptance, assimilation, and utilization of information may be conducted. For example, Newcomb (1) has suggested that the strength of the influence of the peer group is related to its homogenity.

Recommendations for Further Research

The findings and interpretations of the E suggest the desirability of additional research in the area of conforming judgmental decisions and information source. Additional consideration of the conceptualization of "authority figures" appears to be needed; for example, (1) are peers recognized as an authority figure in the employment situation? (2) under what conditions do peers achieve authority status? (3) with what kind of information does the peer achieve authority figure status? and finally, (4) does the influence of dogmatism vary with the nature of the information?

FOOTNOTES

1. Previous analyses of relationships of dogmatism and conformity and status and conformity have not provided a range of status groups from subordinate to peer to superior and/or have not treated data by a factorial analysis. For example, Long reported significant differences between the conforming judgmental behavior of employees when the status variable was limited to superiors and/or subordinates. In an analysis of conforming behavior and dogmatism, Long (3) also reported findings of Rokeach (5), Youniss (4), and his own work which suggested that the relationship between conforming behavior and dogmatism may be influenced by other variables.

2. Utilizing a different sample consisting of 34 employees of the Florida Forest Service, Long (6) found that status or lack of status may influence the conforming judgment of employees in an employment group with employees lacking status conforming with the opinions of high status employees. Sample differences appear to account in part for the different findings. In the earlier reported study, the sample consisted entirely of one employee level with 20 Ss tested with superiors and 14 Ss tested with subordinates. In the earlier study Ss tested with superiors had a mean conformity score of 6.10 and the Ss tested with subordinates had a mean score of 1.57. In the current design Ss receiving information from a superior source had a mean score of ~~3.25~~ 3.42 while the Ss receiving information from a subordinate source had a mean score of ~~1.67~~ 1.83. In the formerly reported analysis, dogmatism scores were not utilized in a manipulative manner as in the currently reported design.

REFERENCES

1. Theodore M. Newcomb. "The General Nature of Peer Group Influence," in College Peer Groups, ed. by Theodore M. Newcomb and E. K. Wilson, Chicago: Aldine Publishing Company, 1966, p. 13.

2. S. E. Asch. Social Psychology. New York: Prentice-Hall, Inc., 1952.

3. Huey B. Long. "Factors Influencing the Relationship Between Dogmatism and Conformity In An Employee Group," The Journal of Social Psychology, 1968, 74, 209-213.

4. R. P. Youniss. Conformity to Group Judgments in Its Relation to the Structure of the Stimulus Situation and Certain Personality Variables. Washington, D. C.: Catholic University Press, 1958.

5. Milton Rokeach, et. al. The Open and Closed Mind. New York: Basic Books, 1960.

6. Huey B. Long. "Status and Conforming Judgment," Adult Education Journal, 1968, 18, 239-246.

Irving B. Long

TABLE 1

Analysis of Variance of Dogmatism
Among Six Means

Source of Variation	Sum of Squares	df	Mean Square	F ratio
Among Six Means	38,654.45	5	7,730.89	149.26
Within	1,556.19	30	51.86	($F._{95}(5,30)=2.5$
Total	40,211.64	35		
Row Means	31,069.23	1	31,069.23	599.32
Column Means	301.35	2	150.57	2.95
Interaction	7,284.87	2	3,642.44	60.52
Subtotal	38,655.45	5	7,731.49	
Within groups	1,556.19	30	51.84	
	40,211.64	35		

$F._{95}(1,30)=4.17$; $F._{95}(2,30)=3.32$

TABLE 2

Analysis of Variance of Judgmental Modifications
Among Six Means

Source of Variation	Sum of Squares	df	Mean Square	F ratio
Among Six Means	144.47	5	28.89	2.13
Within	407.84	30	13.59	
Total	552.31	35		
Row Means	23.31	1	23.31	1.71
Column Means	90.72	2	45.36	3.34
Interaction	30.44	2	15.22	
Subtotal	144.47	5	28.89	
Within Groups	407.84	30	13.59	
Total	552.31	35		

$F._{95}(5,30)=2.53$; $F._{95}(1,30)=4.17$; $F._{95}(2,30)=3.32$

TABLE 3

Factorial Analysis of Judgmental Modification
According to Information Sources

	HIGH DOGMATIC			LOW DOGMATIC			
Information Source Status	Superior	Sub.	Peer	Superior	Sub.	Peer	Confidence Limits
Mean	1.33	1.16	6.00	5.50	2.50	5.33	
Constrast							
1	1	-1					.17 ± 3.24
*2	1		-1				-4.67 ± 3.24
*3		1	-1				-4.84 ± 3.24
*4				1	-1		2.50 ± 3.24
5				1		-1	.17 ± 3.24
*6					1	-1	-2.83 ± 3.24
*7	1			-1			-4.17 ± 3.24
8		1			-1		1.09 ± 3.24
9			1			-1	.67 ± 3.24
10	1/2	-1/2		1/2	-1/2		.59 ± 3.24
11	1/2		-1/2	1/2		-1/2	-2.25 ± 3.24
*12		1/2	-1/2		1/2	-1/2	-3.84 ± 3.24
13	1/3	1/3	1/3	-1/3	-1/3	-1/3	-1.61 ± 3.24
14	1/2	1/2	-1	1/2	1/2	-1	-4.08 ± 3.24
15	1/2	-1	1/2	1/2	-1	1/2	3.26 ± 3.24
16	-1	1/2	1/2	-1	1/2	1/2	.67 ± 3.24

$q_{.95}(6,30)+4.30$; $S=1.85\left(\frac{qs}{n}\right)$

*Significant at .05 level.

ERIC Clearinghouse
FEB 25 1970
on Adult Education